

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-025118**Date Inspected:** 11-Jul-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process.

A). OBG 11E/12E

The QAI observed the excavation of the R2 cycle reject discovered during the Ultrasonic Testing (UT) performed by the QC Technician Steve McConnell. The excavation was performed by welding personnel Rick Clayborn ID-2773 utilizing the Air Carbon Arc (ACA) cutting method to remove the internal defect. At the conclusion of the ACA this area was ground to a bright metal utilizing a high cycle grinder and a visual inspection followed by a Magnetic Particle Test (MPT) of the area was performed by Mr. McConnell. No reject able indications were noted by the QC inspector and Mr. Clayborn commenced the welding of the excavation utilizing the WPS identified as ABF-WPS-D15-1001-Repair, Rev. 0. The QAI observed the QC inspector monitoring the repair welding and verifying the welding parameters utilizing the WPS as a reference.

B). Pipe Welds

The QAI observed the CJP Welding of the 2.5" domestic water and 4.0" compressed air line system field splices along the gridline E5 of the Orthotropic Box Girders (OBG) E1 and E2. The welding was performed by Rick Kiikvee ID-5319 utilizing the SMAW process as per the WPS identified as 1-12-1. The production welding and

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the inspection performed by the QC inspector, Steve Jensen, appeared to meet the requirements of the contract specifications.

C). QA Verification

This QAI performed an Ultrasonic Test (UT) verification on various Complete Joint Penetration (CJP) groove welds. A total area of approximately 10% was randomly tested to verify the weld and testing by QC meet the requirements of the contract documents. For additional information and locations see the UT reports identified, TL-6027, generated on this date.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat and horizontal positions utilizing the low hydrogen H4R electrodes. The 3.2 mm electrodes were stored in electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the work observed during this scheduled work date.



Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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Inspected By:	Reyes,Danny	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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